UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/736,239	12/15/2003	John J. Mampc	18525-0802	3153

39943   7590   10/29/2007
PHILIP G. MEYERS LAW OFFICE
1009 LONG PRAIRIE ROAD, SUITE 300
FLOWER MOUND, TX 75022

EXAMINER
ALLISON, ANDRAE S

ART UNIT	PAPER NUMBER
2624	

MAIL DATE	DELIVERY MODE
10/29/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

PTOL-90A (Rev. 04/07)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after t he mailing date of this com munication, even if timely filed, may re duce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>30 July 2007</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3-5 and 7-18* is/are pending in the application.

     4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3-5 and 7-18* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

     a)☐ All   b)☐ Some * c)☐ None of:

         1.☐ Certified copies of the priority documents have been received.

         2.☐ Certified copies of the priority documents have been received in Application No. _____.

         3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

     * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
     Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
     Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

Response to Remarks

1.   The Office Action has been issued in response to amendment filed July 30, 2007.

Claims 1, 3-5 and 7-18 are pending. Applicant's arguments have been carefully and

respectfully considered in light of the instant amendment, and some are persuasive.

Drawing Objection

New drawings were entered on July 30, 2007 and have been accepted by the

Examiner. Therefore, the objection has been removed.

112 Rejection

Claim 12 has been amended to overcome the indefiniteness. Therefore, the

rejection has been removed.

102 &103 Rejections

In response to Applicant's argument on page 9 that Avant and Haruki fail to

disclose the limitations of amended claim 1, previously claims 1 and 6, the Examiner

agrees. Neither reference discloses the limitation "carrying out steps (a) to (e)

concurrently for more than one mail piece at a time as the mail pieces are moving on

the conveyer". However, upon review of the prior art, new grounds of rejection are

presented. Applicant also argued that Haruki does not teach where the steps providing

before each mail piece reaches the first diverter gate. However, the Examiner

disagrees, since Haruki teaches that the mail pieces are processed completely before reaching the stackers.

On page 10, [p][002] Applicant further argued that method of claim 12 deals with ID tagging mail piece at the same time as the bar code and address code. However, the claim as drafted does not mention that the mail piece is tagged at the same time as the bar code and address code. Applicant also stated that Fisher et al does not disclose the limitation of claim 12. The Examiner, however, disagrees since Fisher teaches where a scanner at a post office read a mail piece and extract a unique identifier contained on the mail piece that is associated with a sender and used this identifier to track the mail piece from it's arrival to destination place (column lines 3, lines 25-50).

Applicant on page 10, [p][003], argued that the reasons for rejecting claims 14 and 15 are not understood, however, did not discussed whether the Examiner addressed all the limitations of the claims. Claim 14 disclose imaging a mail piece using a first and second imaging camera and processing the mail pieces using the image data. The Examiner identified all limitations in Avant and Stevens and then provided the motivation for combining the references.

Claim Rejections - 35 USC § 103

2.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3.   Claims 1, 3, 5 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Avant et al (US Patent No.: 6,977,353) in view of Moed et al (US Patent No.:

5,770,841).

As to independent claim 1, Avant discloses a method sorting a series of mail

pieces (identifying and processing mail in a mail sorting system, column 5, line 29),

comprising the steps of: (a) scanning a surface of each mail piece with at least one

imaging camera to obtain at least one image (e.g. 100, see Fig 2A) of the surface

represented by image data (column 7, line 67 and column 8, line 1) (b) analyzing the

image data to locate a destination bar code in the image (read ID barcode 204, on a

mail piece see Fig 2B and column 11, lines 1-2); (c) analyzing the bar code to recognize

a first destination code (see column 11, lines 4-10, where the ID barcode is analyzed to

resolve a zip code); (d) if the first destination code meets predetermined criteria, then

processing the mail piece further in a manner dependent on the first destination code

(see column 8, lines 6-10, where if a postnet code is resolved, then a postnet code

corresponding to a destination address is sprayed unto to the front of the mail piece);

(e) if the first destination code cannot be recognized or fails to meet the predetermined

criteria, then analyzing the image data to locate destination address lines in the image,

analyzing the address lines to determine a second destination code, and processing the

mail piece further in a manner dependent on one of the second destination code, or a

result determined by arbitrating the first and second destination codes (see column 8,

lines 35-67 and column 9, lines 1-16 where if the cannot resolve a zip code, the address

portion of the mail piece is analyzed to determine zip code and the postnet code is re-

sprayed on the mail piece). However, Avant does not disclose conveying a series of the

mail pieces and carrying out steps (a) to (e) concurrently for more than one mail piece

at a time as the mail pieces are moving on the conveyer. Moed et al discloses a method

for reading package information (column 2, lines 33-35) that includes the step of

conveying a series of the mail pieces (column 2, lines 38-40) and carrying out steps (a)

to (e) concurrently for more than one mail piece at a time as the mail pieces are moving

on the conveyer (see column 11, lines 32-36, where OCR and decoding a bar code is

done in parallel). At the time of the invention, it would have been obvious to a person of

ordinary skill in the art to have combined the teachings of Avant and Moed to provide an

efficient method for sorting packages by imaging the packages decode the destination

and barcode data in parallel and forming a unified package record.

As to claim 5, Avant teaches the method, further comprising: determining if the

mail piece bears an ID tag associated with that mail piece in previous postal processing;

if such an ID tag is identified, retrieving a third destination code associated with the

identification code from a computer accessible storage medium; and sorting the mail

piece based on the retrieved third destination code (see column 9, line 62-67 and

column 10, lines 1-4, where if a destination code cannot be resolve, the mail piece

image, ID tag along with other files are sent to a Remote Computer Reader so that a the

unresolved zip code can be compared to a central database).

As to claim 13, Avant teaches the method, wherein step (e) further comprises

printing a bar code on the mail piece, which bar code embodies a scannable destination

code which is the second destination code (see column 8, lines 6-10, where if a postnet

code is resolved, then a postnet code corresponding to a destination address is sprayed

unto to the front of the mail piece).

As to claim 3, Avant does not disclose expressly the method, wherein at least

about 1% of mail pieces processed are sorted based on the second destination code.

At the time of the invention, it would have been obvious to a person of ordinary skill in

the art to sort the mail piece wherein at least about 1% of mail pieces processed are

sorted based on the second destination code. Applicant has not disclosed that sorting

the mail piece wherein at least about 1% of mail pieces processed are sorted based on

the second destination code provides an advantage, is used for a particular purpose or

solves a stated problem. One of ordinary skill in the art, furthermore, would have

expected Applicant's invention to perform equally well with the method sorting 0.5 or 2%

based on the second destination code because the sorting algorithms could be tweaked

until the preferred or desirable sorting based on the second destination code is found.

4.   Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Avant et

al (US Patent No.: 6,977,353) in view of Moed et al (US Patent No.: 5,770,841) further

in view of Rosenbaum et al (US Patent No.: 5,031,223).

As to claim 4, Avant discloses the method of creating a scannable identification

code on the mail piece surface (204, ID tag, see Fig 2B), however does not expressly

disclose the method, wherein when a mail piece destination cannot be sufficiently

identified from either the first or second destination codes, the method further

comprises: creating a scannable identification code on the mail piece surface; storing

the scanned image of the mail piece in computer accessible form together with the

associated identification code; and sorting the mail piece to a reject bin for unreadable

mail pieces.   Rosenbaum disclose a automated mail processing method (column 1,

lines 7-8) that includes the step wherein when a mail piece destination cannot be

sufficiently identified from either the first or second destination codes, the method

further comprises: creating a scannable identification code on the mail piece surface;

storing the scanned image of the mail piece in computer accessible form together with

the associated identification code; and sorting the mail piece to a reject bin for

unreadable mail pieces (see column 7, lines 1-20, where if the zip code or address of a

mail piece cannot be resolve, an identification number in the form of a bar code is

imprinted on the mail piece and then the mail piece is routed to a rejected tray. Also,

Note that the image of the mail piece is associated with the identification number). At

the time of the invention, it would have been obvious to a person of ordinary skill in the

art to have combined the teachings of Avant and Rosenbaum to provide an improved

technique for multistage processing of mail pieces by deferred processing of OCR

scanned mail, by capturing an image of the mail pieces, printing a serial number on

each mail piece and using the serial number to sort or route the mail pieces.

5.   Claims 6-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Avant et al (US Patent No.: 6,977,353) in view of Moed et al (US Patent No.: 5,770,841)

further in view of Haruki et al (US Patent No.: 4,632,252).

As to claim 6, Avant teaches the method of carrying out steps (a) to (e)

concurrently for more than one mail piece at a time as the mail pieces, however does

not specifically mentions conveying a series of the mail pieces on a conveyor. Haruki

teaches a method for sorting mail which includes the step of conveying a series of the

mail pieces on a conveyor (113, see Fig 2 and column 3, lines 29-30). At the time of the

invention, it would have been obvious to a person of ordinary skill in the art to have

combined the teachings of Avant and Haruki to sort mail or postal objects in a more fast

and efficient matter by using coding devices to resolve unreadable zip codes.

As to claim 7, Haruki teaches the method, wherein the conveyor transports the

mail pieces past a series of diverters (control gates; column 3, line 18) used for sorting

the mail pieces, further comprising completing steps (a) to (e) for each mail piece before

each mail piece reaches a first one of the diverters (note that all the processing is done

before reaching the control gates, see column 3, lines 7-25).

As to claim 8, Avant teaches the method, further comprising buffering the image

data in a computer memory as one of a series of images for successive mail pieces

(see column 10, lines 55-57, where if a zip code cannot be resolved, the mail piece

image is stored in image buffer 618, see Fig 6A).

As to claim 9, Avant teaches the method, further comprising carrying out step (e) only upon completion of steps (b) thru (d) when the first destination code cannot be recognized or fails to meet the predetermined criteria (note that only when the zip code cannot be resolved that step (e) is carried out, see column 8, lines 36-37).

As to claim 10, Avant teaches the method, further comprising initiating step (e) in parallel with steps (b) thru (d) (see column 8, lines 40-41).

As to claim 11, Avant teaches the method, further comprising: terminating step (e) when it is determined that the first destination code meets the predetermined criteria; and continuing step (e) to completion when the first destination code cannot be recognized or fails to meet the predetermined criteria (note that the process of resolving the zip code stops if the zip code is resolve during the first two steps, see column 8, lines 19-21).

6.   Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Avant et al (US Patent No.: 6,977,353) in view of Fisher et al (US Patent No.: 6,427,021).

As best understood, as to claim 12, Avant does not expressly disclose the method, wherein step (e) further comprises: analyzing the image data to determine if a predetermined data pattern, other than a bar code or address lines, associated with a destination is present; if such a data pattern is present, determining a corresponding

third destination code for the destination associated with the pattern; and processing the mail piece further in a manner dependent on the third destination code. Fisher disclose a method for tracking a mail piece (see title) that includes analyzing the image data to determine if a predetermined data pattern, other than a bar code or address lines, associated with a destination is present; if such a data pattern is present, determining a corresponding third destination code for the destination associated with the pattern; and processing the mail piece further in a manner dependent on the third destination code (see column lines 3, lines 25-50, where a scanner at a post office read a mail piece and extract a unique identifier contained on the mail piece that is associated with an sender and used this identifier to track the mail piece from it's arrival to destination place). At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combined the teachings of Avant and Fisher to scan a mail piece, extract a unique identifier and use the identifier to further process the mail piece.

7.   Claims 14-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Avant et al (US Patent No.: 6,977,353) in view of Stevens et al (US Patent No.: 5,558,232).

As to claim 14, Avant discloses the method, further comprising scanning a surface of each mail piece with a first imaging camera to obtain a first image (see Fig 2A) of the surface represented by first image data; scanning a surface of each mail piece with a second imaging camera to obtain a second image (see Fig 2B) of the surface represented by first image data; carrying out steps (b)-(d) using the first image

data; and carry out step (e) using the second image data. Avant does not disclose expressly a first imaging camera and a second imaging camera. Stevens discloses a method for sorting documents (column 1, lines 6-7) that includes a first imaging (66, see Fig 6) camera and a second imaging camera (80, see Fig 6). At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combined the teachings of Avant and Stevens for efficient sorting incoming mail pieces by using multiple cameras to image front and back of the mail pieces and transporting them to the correct bins (column 1, lines 30-33 and column 2, lines 45-57). Furthermore, Advant does not expressly disclose carrying out steps (b)-(d) using the first image data; and carry out step (e) using the second image data. However, it would have been obvious to carrying out steps (b)-(d) using the first image data; and carry out step (e) using the second image data because performing the steps in respective order would depend on which side of the a mail piece the destination bar code is present.

As to independent claim 15, this claim differs from claim 1 only in that claim 15 is apparatus whereas, claim 1 is method and the limitations a conveyor which transports a series of mail pieces; a series of diverters which are each operable to divert mail pieces from the conveyor to one of a series of sorting destinations; an imaging camera positioned proximate the conveyor for scanning a surface of each mail piece to obtain an image of the surface represented by image data; and a computerized control system are additive recited. Note the discussion above, Moed teaches a conveyor (18, see Fig 1) which transports a series of mail pieces; an imaging camera (28, see Fig 1)

positioned proximate the conveyor for scanning a surface of each mail piece to obtain

an image of the surface represented by image data; and a computerized control system

(see Fig 1) . However, neither Avant or Moed disclose a series of diverters which are

each operable to divert mail pieces from the conveyor to one of a series of sorting

destinations wherein the computerized control system completes the foregoing steps

before the mail pieces reaches a first one of the diverters. Stevens discloses a method

for sorting documents (column 1, lines 6-7) that includes a series of diverters (e.g. 47,

48, 49, see Fig 2) which are each operable to divert mail pieces from the conveyor to

one of a series of sorting destinations and wherein the computerized control system

completes the foregoing steps before the mail pieces reaches a first one of the diverters

(note that all the processing is done before the document reaches stacker 50, column

10, lines 40-46). At the time of the invention, it would have been obvious to a person of

ordinary skill in the art to combined the teachings of Avant as modified by Moed and

Stevens for efficient sorting incoming mail pieces by using multiple cameras to image

front and back of the mail pieces and transporting them to the correct bins (column 1,

lines 30-33 and column 2, lines 45-57).

As to claim 16, note the discussion above, Stevens teaches the apparatus,

further comprising: a first sensor (138, see Fig 7) located proximate the conveyor and

imaging camera able to sense a mail piece passing by; a second sensor (138, see Fig

7) located proximate the conveyor and upstream from a first one of the diverters; and

wherein the computerized control system further comprises means for terminating

processing of image data and providing a sorting decision when a mail piece detected

by the first sensor is then detected by the second sensor (column 12, line 67 and

column 13, lines 1-16).

As to claim 17, neither Avant nor Steven discloses the apparatus, wherein the

sensors are photocells. However, it would have obvious to the sensors are photocells in

the mail sorting apparatus to sense the beginning and end of a mail piece as move

along a conveyer or transport belt furthermore, the use of photocells as transport sensor

is well known in the art (OFFICIAL NOTICE).

As to claim 18, Stevens teaches the apparatus, wherein the computerized control

system further comprises a memory buffer (e.g. 162, see Fig 8) for storing image data

from a plurality of mail pieces in transit between the first and second sensors (column

13, lines 31-54).

Inquires

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Andrae S. Allison whose telephone number is (571)

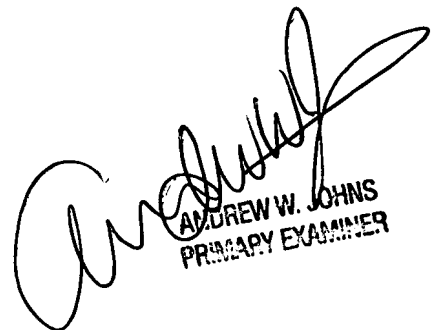270-1052. The examiner can normally be reached on Monday-Friday, 8:00 am - 5:00

pm, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Bhavesh Meta can be reached on (571) 272-7453. The fax phone number

for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Andrae Allison

October 19, 2007

A .A.

ANDREW W. JOHNS
PRIMARY EXAMINER